

Namaskar and Good Morning Everyone! Today...



Welcome

Department of Mathematics
University of Rajshahi

Today, We are going to show a problem-solving of **C** language

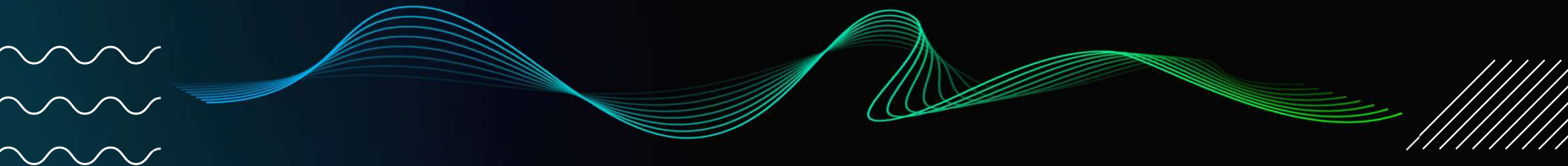
I am honored to stand before you today as the representative of Team 06. My name is [name], and it is my privilege to present our project to our honorable professor, Dr. [name].

Represent By:-

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Session : 2020-21

Represent To:-

Professor Dr. Gour Chandra Paul
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In this slide, we will be showcasing the names and IDs of our team members.

Name and Id of Our Team Members

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The project contents are divided into 3 parts..

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About the project

The project involves creating a program in **C** to generate a rectangle shape using asterisks based on user input for width and height.

02

Major Requirement

- **C** Programing Language
- User Interaction
- Rectangle Generation
- Output Display

03

Project goals

The project's primary goal is to develop a program that allows users to define the dimensions of a rectangle and generates a visual representation of the rectangle using asterisks.



Now, it's time to explore what C is

INTRODUCTION of C

C is a powerful and widely-used programming language known for its **efficiency** and **versatility**. It is a procedural language with a **simple syntax**, offering **low-level memory** access and portability across different platforms.



In this project, we utilize the "for" loop. Let's know about for loop in c

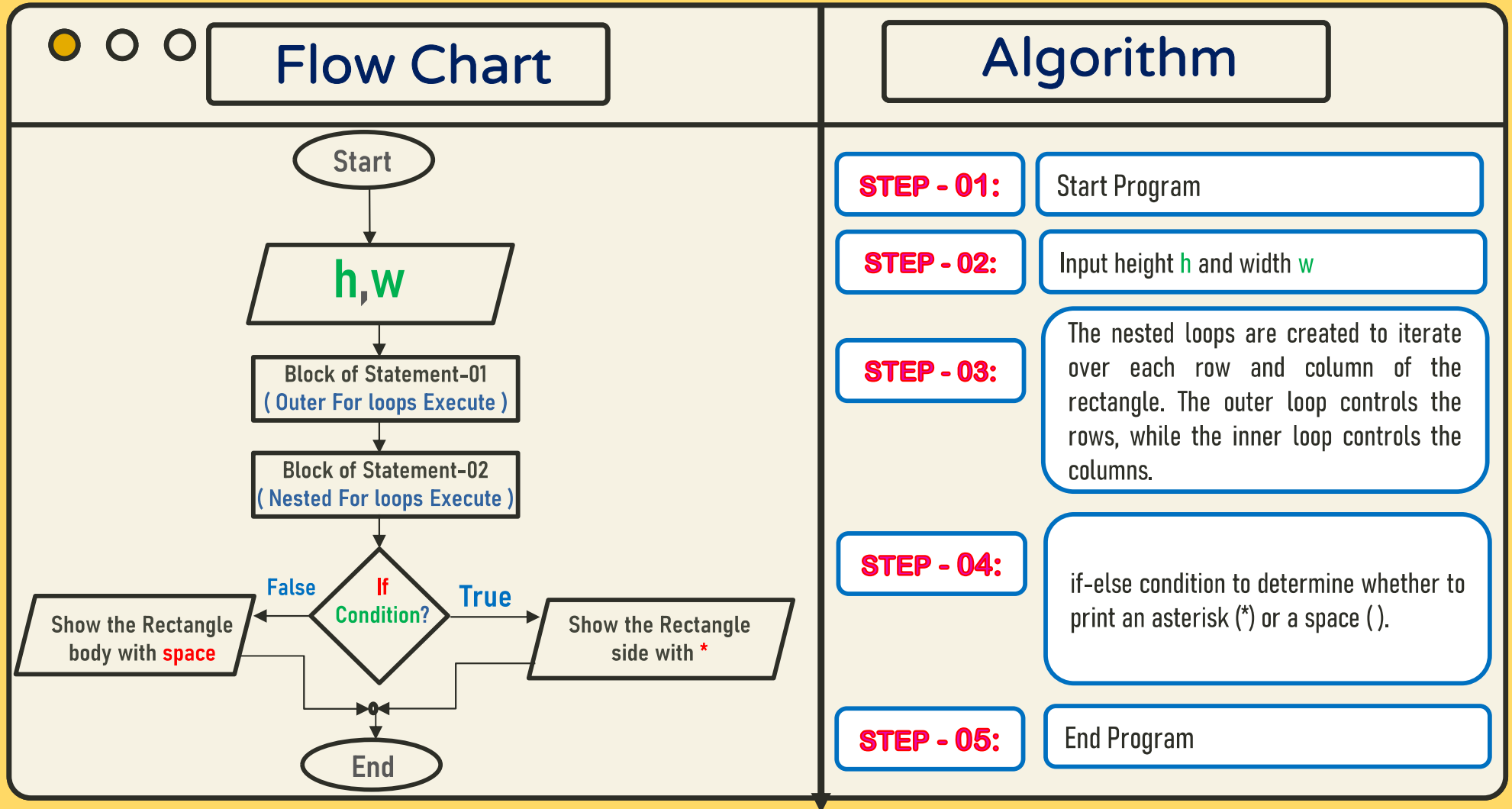


01

What is For Loop in C

A **for loop** in **C** is a control structure that **repeatedly** executes a block of code based on a specified condition, initialization, and **increment** or **decrement**, allowing efficient iteration and control over the loop execution flow.

Now, we are going to describe the flow chart and algorithms of this project



Let's Enjoy the code explanation of this project

Code Explanation

```
1 #include <stdio.h>
2
3 int main() {
4     int w, h;
5
6     printf("Enter the width of the
7     rectangle: ");
8     scanf("%d", &w);
9     printf("Enter the height of the
10    rectangle: ");
11    scanf("%d", &h);
12
13    for (int i = 0; i < h; i++) {
14        for (int j = 0; j < w; j++)
15        {
16            if (i == 0 || i ==
17                h-1 || j == 0 || j ==
18                w-1) {
19                printf("*");
20            } else {
21                printf(" ");
22            }
23        }
24        printf("\n");
25    }
26
27    return 0;
28 }
```

Header Files

Declare variables

Get input from User

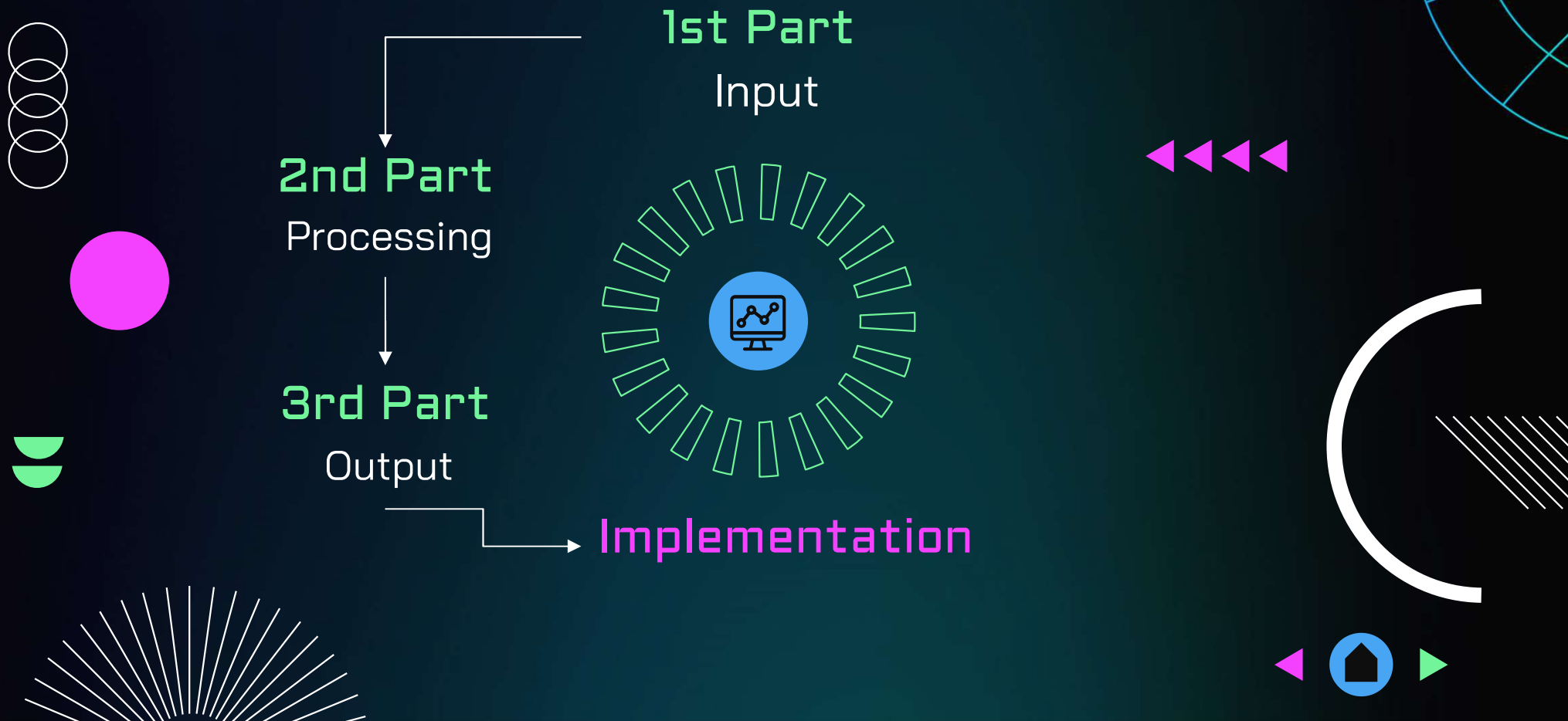
Generate the rectangle using asterisks

Return from the main function



In this project, the code execution follows three distinct parts

Description of the project content



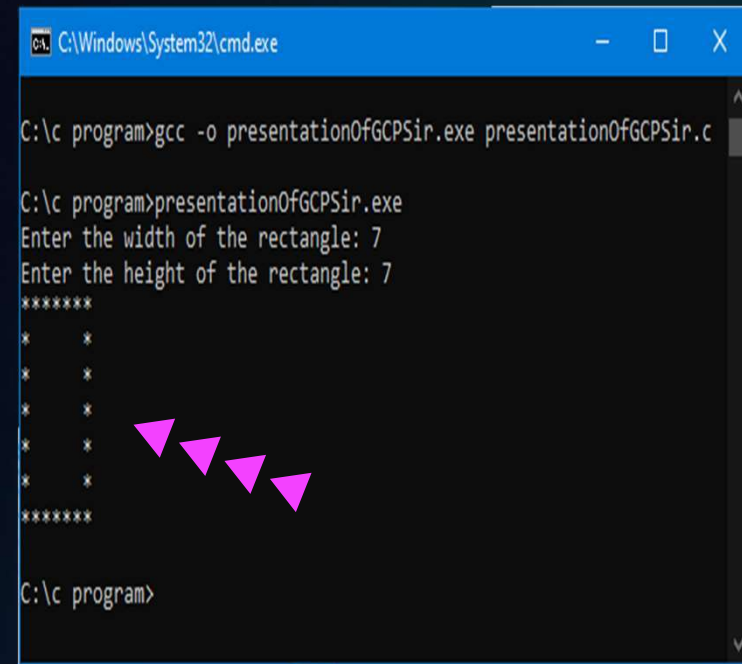
Now, let's take a look at the results obtained from this project.

Rectangle Printing Program: Input Width and Height, Display Output

```
#include <stdio.h>
int main() {
    int w, h;
    printf("Enter the width of the rectangle: ");
    scanf("%d", &w);
    printf("Enter the height of the rectangle: ");
    scanf("%d", &h);
    for (int i = 0; i < h; i++) {
        for (int j = 0; j < w; j++) {
            if (i == 0 || i == h-1 || j == 0 || j == w-
1) {
                printf("*");
            } else {
                printf(" ");
            }
        }
        printf("\n");
    }
    return 0;
}
```

Enter the width of the rectangle: 7

Enter the height of the rectangle: 7



```
C:\Windows\System32\cmd.exe

C:\c program>gcc -o presentationOfGCPSir.exe presentationOfGCPSir.c

C:\c program>presentationOfGCPSir.exe
Enter the width of the rectangle: 7
Enter the height of the rectangle: 7
*****
*      *
*      *
*      *
*      *
*      *
*****

C:\c program>
```



Professor Dr. Gour Chandra Paul
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Thanks

Thanks to our honorable professor *Dr. Gour Chandra Paul*,
Team members, and presented all teams who enjoyed our
presentation attentively. If we get more chances, we will
develop ourselves to solve any program.

Source Of Images & defination:

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